

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 to 19 (canceled)

20. New

A thermo-hydrodynamic force amplifier in which a liquid is displaced between a hot region (14) and a cold region (16) within a rigid cylinder (13) by means of a driven auxiliary piston (11) through conduits of a heater-generator-cooler arrangement (14, 15, 16) or of a heater-recuperator-cooler arrangement (14, 15, 16) so that the liquid cyclically contracts and expands, thereby providing output work (19) that in each cycle is greater than an input work (12) at the auxiliary piston (11), wherein the liquid in the arrangement (14, 15, 16) is cyclically displaced in alternating flow directions and produces the output work (19) at a separate machine (18, 33).

21. New

The force amplifier as set forth in claim 20, wherein the liquid produces the output work (19) during expansion, being thereby expanded to atmospheric pressure (P_0) or to a slightly higher pressure, and that the liquid is then returned to an initial

state in the cycle by being caused to contract by a reversible cooling process.

22. New

The force amplifier as set forth in claim 20, wherein a switchable shut-off element (17) by means of which the pressure generated by the expanding column of liquid may be regulated both in terms of time and quantity.

23. New

The force amplifier as set forth in claim 20, wherein a working frequency that is clearly below 1 Hz.

24. New

The force amplifier as set forth in claim 20, wherein the separate machine (18, 33) is coupled to the output (30) of the force amplifier in such a manner that the linear work production of the cyclically expanding liquid is directly coupled into the separate machine, said separate machine (18, 33) being a linear motion energy converter, more specifically an air compressor, a pressure generator in a reverse osmosis system or the like.

25. New

The force amplifier as set forth in claim 20, wherein the separate machine (18, 33) is coupled to the force amplifier through

a force balancer (30) and a pressure coupling (33a) and acts as a refrigerator-heat pump.

26. New

The force amplifier as set forth in claim 20, wherein the separate machine is a hydraulic engine (18) through which the thermally expanding liquid flows cyclically so that rotational energy (19) is generated at a shaft of the hydraulic engine.

27. New

The force amplifier as set forth in claim 26, wherein the liquid that cyclically expands and contracts is concurrently used as a hydraulic liquid by the hydraulic engine (18).

28. New

The force amplifier as set forth in claim 26, wherein an expansion tank (20) that is pressurized to atmospheric pressure (P_0) or to a slightly elevated pressure is mounted downstream of the hydraulic engine (18).